WHAT IS CLAIMED IS:

1. A rewritable multilayer recording medium in which a light beam is transmitted through one recording layer and at the same time said light beam is irradiated to another recording layer, thereby recording a data signal, wherein a dummy signal is recorded on said one recording layer prior to recording of the data signal on said another recording layer.

2. A multilayer recording medium according to claim 1, wherein a frequency f of said dummy signal satisfies;

$$f \geq v \times n/(2 \times NA \times d)$$

where,

d (mm): interval between said one recording layer and said another recording layer

NA: numerical aperture of an objective lens for converging said light beam

n: refractive index of a medium between said one recording layer and said another recording layer

v (mm/sec): line velocity of said multilayer recording medium when recording said dummy signal.

3. A multilayer recording medium according to claim 1, wherein said dummy signal has a pulse train such that a transmittance of said one recording layer after said dummy signal is recorded is approximately identical to a

transmittance after a predetermined data signal is recorded to said one recording layer.

4. A multilayer recording medium according to claim 2, wherein said dummy signal has a pulse train such that a transmittance of said one recording layer after said dummy signal is recorded is approximately identical to a transmittance after a predetermined data signal is recorded to said one recording layer.

5. A recording apparatus of a rewritable multilayer recording medium in which a light beam is transmitted through one recording layer and at the same time said light beam is irradiated to another recording layer, thereby recording a data signal, comprising:

a recording unit for recording a dummy signal on said one recording layer prior to recording of the data signal on said another recording layer.

6. An apparatus according to claim 5, wherein said recording unit includes a dummy-signal generating unit for generating said dummy signal and a frequency f of said dummy signal satisfies;

$$f \geq v \times n/(2 \times NA \times d)$$

where,

d (mm): interval between said one recording layer and said another recording layer

NA: numerical aperture of an objective lens for converging said light beam

n: refractive index of a medium between said one recording layer and said another recording layer

v (mm/sec): line velocity of said multilayer recording medium when recording said dummy signal.

7. An apparatus according to claim 5, wherein said dummy signal has a pulse train such that a transmittance of said one recording layer after said dummy signal is recorded is approximately identical to a transmittance after a predetermined data signal is recorded to said one recording layer.

8. An apparatus according to claim 6, wherein said dummy signal has a pulse train such that a transmittance of said one recording layer after said dummy signal is recorded is approximately identical to a transmittance after a predetermined data signal is recorded to said one recording layer.

9. An apparatus according to claim 5, wherein said light beam has an elliptic beam spot whose major axis is located in a direction that is approximately perpendicular to tracks on said multilayer recording medium and said beam spot is located over a plurality of tracks of said multilayer

recording medium.

10. A recording method of a rewritable multilayer recording medium, in which a light beam is transmitted through one recording layer and at the same time said light beam is irradiated to another recording layer, thereby recording a data signal, comprising:

a first initializing step of initializing said another recording layer based on a first initializing condition; and

a second initializing step of initializing said one recording layer based on a second initializing condition different from said first initializing condition,

wherein said second initializing condition is determined so that a transmittance of the recording layer after execution of said second initializing step is approximately equal to a transmittance of the recording layer after a predetermined data signal is recorded on said one recording layer.

11. A method according to claim 10, wherein a dummy signal is recorded on said one recording layer.

12. A method according to claim 11, wherein a frequency f of said dummy signal satisfies

$$f \geq v \times n/(2 \times NA \times d)$$

where,

d (mm): interval between said one recording layer and said another recording layer

NA: numerical aperture of an objective lens for converging said light beam

n: refractive index of a medium between said one recording layer and said another recording layer

v (mm/sec): line velocity of said multilayer recording medium when recording said dummy signal.